EXECUTIVE SUMMARY

INTRODUCTION

Mirant proposes to construct and operate the Potrero Power Plant Unit 7 Project (Unit 7) as an expansion to its existing Potrero Power Plant that is located on the eastern shore of the City and County of San Francisco. Mirant filed an Application for Certification (AFC) on May 31, 2000, and the AFC was accepted on October 11, 2000. This action by the Energy Commission initiated staff's independent analysis of the proposed project.

It is the responsibility of the Energy Commission staff to complete an independent assessment of the project's potential effects on the environment, the public's health and safety, and whether the project conforms with all applicable laws, ordinances, regulations and standards (LORS). The staff also recommends measures, referred to as conditions of certification, to mitigate potential significant adverse environmental effects and conditions for construction, operation and eventual closure of the project.

This Final Staff Assessment (FSA) contains staff's analysis and recommendations on the Unit 7 project, a nominal 540-Megawatt (MW) electrical power generation facility. It reflects changes to the Preliminary Staff Assessment (PSA) that was issued on May 31, 2001. The changes to the PSA are a result of further analysis and additional information obtained from different sources, and comments on the PSA that were received from the public, other agencies, intervenors and the applicant. (See the Response to Comments section of this FSA.)

The FSA serves as staff's testimony. It is not a decision document in these proceedings, nor does it contain findings of the Energy Commission related to either environmental impacts or the project's compliance with local/state/federal legal requirements. The California Energy Commission will make the final decision, including findings, after completion of evidentiary hearings. The Committee will hold evidentiary hearings and will consider the recommendations presented by staff, the applicant, all parties, government agencies, and the public prior to proposing its decision.

The Unit 7 project and related facilities such as the electric transmission lines, water supply lines and wastewater lines, are subject to the Energy Commission's license. When issuing a license, the Energy Commission acts as lead state agency under the California Environmental Quality Act (CEQA), and its process is certified by the State Resources Agency as a separate program that satisfies the core CEQA requirements.

LOCAL SYSTEM EFFECTS

The FSA contains a draft Local Systems Effects (LSE) analysis that is new since the Preliminary Staff Assessment was issued in May 2002. Staff invites comments on this draft and requests that they are provided to the Energy Commission's project manager, Marc Pryor, either by mail or by email [mpryor@energy.state.ca.us] no later than February 25, 2002. Staff will consider the comments and would expect to issue a final LSE by March 11, 2002.

PUBLIC WORKSHOPS AND AGENCY COORDINATION

Staff has conducted ten public workshops in San Francisco. Five workshops were held prior to the PSA, four in June addressed the PSA, and the tenth was a workshop on Environmental Justice that was held in August 2001. In addition, two aquatic biology teleconferences were held in Sacramento prior to the completion of the PSA. These teleconferences were noticed and open to the public.

Several of the workshops and teleconferences were attended by local, state and federal agencies including, but not limited to: the City and County of San Francisco (CCSF), Bay Area Air Quality Management District (BAAQMD), California Department of Fish and Game (CDFG), and National Marine Fisheries Service (NMFS). These workshops and teleconferences have been held by staff to understand the issues and concerns of the public, intervenors, agencies, and the applicant. Many helpful comments were received during these events.

In addition to these workshops and teleconferences, extensive coordination has occurred with the numerous local, state and federal agencies that have an interest in the project. Energy Commission staff has worked with the California Independent System Operator (Cal-ISO), California Air Resources Board (CARB), U.S. Environmental Protection Agency (USEPA), San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and California Department of Fish and Game (CDFG), and others to identify and resolve issues of concern.

Written comments on the PSA have been taken into consideration in the FSA, where appropriate. Staff provided responses to comments received from members of the public, other agencies, and the City and County of San Francisco.

ENVIRONMENTAL JUSTICE

Staff has considered an environmental justice implications for the proposed Potrero Unit 7 project. For guidance it has relied on documents from the USEPA. Staff's emphasis includes broad outreach, demographic analysis, impact analysis, and where necessary, analysis of impact proportionality.

The population within the "affected area" for the project (a six-mile radius) includes a 57 percent nonwhite population. This triggered the need to consider environmental justice implications of the project for eleven specific technical areas. These areas are: socioeconomics (demographics), air quality, public health, hazardous materials handling, noise, waste management, water resources, visual, transmission line safety and nuisance, traffic and transportation, and land use.

On April 12, 2001, Energy Commission staff held an environmental justice outreach meeting in Potrero Hill to explain the three primary components of staff's environmental justice analysis: demographics, public outreach, and impacts assessment. Meeting notices were mailed to the Proof of Service (POS) list, the general mailing list, and to all known community organization representatives. In addition, the Commission Public Adviser's Office sent flyers of the meeting to local public schools. Staff held a second

environmental justice meeting in the Potrero Hill neighborhood on August 2, 2001, to discuss staff's Preliminary Staff Assessment, including the areas of air quality, public health, land use, water resources, hazardous materials, and demographics. Meeting notices were distributed to the POS and project mailing lists, and in addition door-to-door in the Potrero Hill Housing Development.

CONCLUSIONS

Each technical area in the FSA includes an analysis of the project and the existing environmental setting; the project's conformance with laws, ordinances, regulations and standards (LORS) and whether the facility can be constructed and operated safely and reliably. Staff assessed the environmental consequences of the project using the mitigation measures proposed by the applicant, and recommends conditions of certification for the construction and operation of the plant, if approved by the Energy Commission.

Except for the following items, the proposed project does not significantly affect public health and safety, the transmission system, and the environment, and complies with all laws, ordinances, regulations and standards. The impacts are:

1. The applicant's proposed mitigation for air quality impacts does not include local mitigation measures.

In the area of most concern to the public, air quality, staff concluded that the impact of the project was significant and recommends mitigation beyond any that would be required by air regulators or other governmental entities. Therefore, staff proposes mitigation that would reduce diesel emissions from buses and trucks in the Potrero area. This would have tangible local benefits with regard to human health. Diesel emissions are acknowledged to be toxic and could have serious effects on public health. Moreover, vehicle emissions are at the ground level, where they are most likely to be inhaled before they are dispersed and diluted.

2. The proposed project's once-through cooling system would cause potentially significant environmental impacts to aquatic biological resources. In addition, it is questionable whether the project, as proposed, would comply with state law regarding Bay fill and federal Endangered Species Act regulations.

To avoid these two impacts, staff has studied alternative power plant cooling technologies that would not use Bay waters for cooling, and believes that a hybrid ("wet-dry") system is the most feasible alternative.

3. Staff agrees with the applicant that demolition of two structures, the Meter and Compressor Houses, would be significant impacts.

Staff's preferred mitigation would be relocation of the two historic buildings to a nearby vacant property. This mitigation would reduce the impact to less than significant. Although staff has ascertained that it is feasible to move the buildings, at this time there is no surety that one or more nearby parcels of vacant land could be the permanent

home for these buildings. Staff will continue to pursue this option. In the event that by the hearings feasiblity is not assured, staff proposes recordation and a display kiosk as partial mitigation. This will require a CEQA override finding by the Energy Commission.

POWER PLANT COOLING

The applicant proposes to utilize waters from San Francisco Bay for power plant cooling using a once-through system. The proposed use of once-through cooling creates potentially significant impacts on aquatic biological resources that may not be mitigable.

This impact results in part from the "entrainment" of species in the large volume of water that the project requires for "once through" cooling. "Entrainment" refers to the varied species, from plankton to small fish, that would be circulated with the cooling water through the project cooling system and destroyed as a result. The San Francisco Bay is a delicate environmental resource with a legacy of abuse. Recovery of this impaired water body and its ecosystem will be hindered by this additional burden.

Use of once-through cooling also entails a high degree of regulatory uncertainty. The San Francisco Bay Conservation and Development Commission (BCDC) is required to report to the Energy Commission its recommendations regarding measures to avoid the impacts of "bayfill", including the water intake and outlet structures. Should BCDC ultimately recommend an "upland" (non-bayfill) alternative to once-through cooling, the Energy Commission could only license a project with once-through cooling if it found the upland alternative to have greater comparable environmental impacts or that alternatives to fill were infeasible.

In addition, USEPA has recently issued new regulations for intake and outfall structures that may apply to the NPDES permit issued by the Regional Water Quality Control Board for all "new facilities". USEPA Region 9 formally stated in December 2001 that the stringent new regulations apply to the project, declaring it a "new facility". USEPA's Washington, D.C. office has since countermanded the prior letter, but it remains unclear as to when and how this issue will be definitively resolved. Staff believes these regulatory uncertainties, coupled with impacts on aquatic resources, make an upland alternative cooling system highly preferable to the project as proposed.

Staff has analyzed three upland cooling technology alternatives that would not use Bay waters for power plant cooling - wet cooling, hybrid (wet/dry) cooling, and dry cooling - in an appendix to the Aquatic Biological Resources section. Staff concludes that both the hybrid and dry cooling alternatives are feasible. However, use of hybrid technology is preferred due to space constraints, potentially significant adverse visual impacts associated with the dry cooling alternative, and the availability of reclaimed water from the City's Southeast Water Treatment Plant located about one mile from the Potrero Power Plant site. Use of reclaimed water would benefit the City by reducing the quantities of treated water discharged to the Bay as part of its operations of the treatment plant.

COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The project complies with all applicable LORS, with two possible and important exceptions. First, as discussed above, it is not clear whether the proposed project would comply with BCDC statutes regarding fill. Second, the applicability of the federal Clean Water Act (CWA) 316(b) regulations is neither completely resolved, nor is it known how such resolution will occur.

In addition, staff anticipates that USEPA will initiate formal Endangered Species Act (ESA) consultation with National Marine Fisheries Service (NMFS). If so, the process will be: 1) NMFS must express to USEPA its belief that the proposed project will impact Endangered Species Act listed species (salmonids), 2) USEPA would need to agree, 3) USEPA would either request information from the applicant that would allow it (USEPA) to prepare a Biological Assessment (or more likely, the applicant would provide a Biological Assessment to USEPA), 4) USEPA would then initiate CWA section 7 consultation with NMFS by forwarding the Biological Assessment. Once the submission is found complete, which may take more than one iteration, NMFS would have at least 135 days to complete a Biological Opinion.

Finally, the City and County of San Francisco adopted an ordinance (the "Maxwell" ordinance) in 2000 "…requiring all City officials and departments to advocate these requirements . . . in regulatory proceedings and negotiations regarding [Potrero Unit 7] and requiring approval of the Board of Supervisors for any agreement by City officials or departments for new electric generation in Southeast San Francisco." The ordinance goes on to include findings with regard to the health of the nearby population and policies or conditions for the City's approval of Potrero Unit 7. While the Maxwell ordinance is certainly an important pronouncement of what the City believes should be required for its approval of the project, its directives are internal, and apply to the City's own officials and departments. For instance, it would appear on its face to be binding on the City's Port Authority, which the City asserts must grant some entitlement to Mirant to replace existing water intakes and outlets with new ones. However, because the ordinance is essentially a directive to its own officials, staff does not believe that it is a LORS in the ordinary meaning of the term, and does not believe that override findings are required if the project is licensed without complete accord with all of its provisions.

BENEFITS OF THE UNIT 7 PROJECT TO SAN FRANCISCO

Unique circumstances surround power generation and supply to the San Francisco Peninsula. Local generation by the existing Potrero and Hunters Point Power Plants are inadequate to provide reliable service to the City. The Potrero and Hunters Point Power Plants are quite old and increasingly unreliable, their air pollution emissions are high, and they are severely constrained by air quality permit limitations regarding the number of hours they can operate. The additional supply the City needs is provided by a limited capacity of transmission capacity coming up the San Francisco Peninsula. Thus, the City relies heavily on out-of-area generation, making it vulnerable to non-local natural and man-made disasters that could disrupt transmission service. New generation is needed to bolster reliability and to end reliance on power plants that often are not available because they break down or are limited by environmental concerns.

Energy Commission staff and the Cal-ISO have completed an analysis of the local electric transmission system effects of the project. This analysis concludes that the project will provide substantial electrical system benefits. These benefits are described below. (Please see the Local System Effects section for a full discussion.)

1. Unit 7 will displace significant transmission upgrades that would be required to maintain reliability if Hunters Point Power Plant is retired without the addition of generation in San Francisco. Unit 7 represents a significant source of real and reactive power to serve loads in the immediate San Francisco Peninsula Area; such resources substantially reduce the need to import power over already-stressed transmission facilities. Note that, if Hunters Point Power Plant is retired once Unit 7 is added, the addition of Unit 7 would not lead to the deferral of any currently planned transmission facilities, instead, Unit 7 offsets the need for *other additional* future transmission reinforcements (beyond those already in the transmission plan).

2. The addition of Unit 7 will substantially reduce transmission system losses. Over 20 years, the savings to ratepayers have a present value at between $55 million and $80 million. As well as reducing the cost of producing power in California, these loss savings would also contribute to a related decrease in the use of fossil fuels, water, and the production of air emissions by reducing the need for additional generation resources.

3. A primary benefit of the addition of Unit 7 is that it would add generation that is more reliable than the generation that is currently in place in the San Francisco Peninsula. Because of their advanced ages, existing generating plants on San Francisco Peninsula are unreliable and it is uncertain how much longer they can continue to operate. Moreover, the units are either run-time limited or de-rated (in terms of maximum output) due to emission output limitations and will likely require further upgrades to remain in operation in coming years.

4. Unit 7's additional generation will provide greater flexibility within the Bay Area for the Cal-ISO, PG&E, and generation owners to schedule maintenance on transmission facilities and generating units. Also, during periods of high demand, Unit 7 will provide critically needed margin and the flexibility to manage adverse and unexpected conditions.

5. Unit 7 can be connected to the ISO controlled grid with the projects identified in the current transmission plan and several system protection schemes.

RECOMMENDATION

Staff recommends that the Energy Commission license the Potrero Power Plant Unit 7 Project with mitigation, including replacement of the proposed once-through cooling system with an alternative cooling system and mitigation to reduce local diesel emissions from buses and trucks. The Unit 7 project will serve an important public purpose in helping secure a reliable energy supply for the upper San Francisco peninsula, and will help provide for the timely shutdown of the Hunters Point Power

Plant. Staff's proposed mitigation measures are needed to reduce or avoid local and regional air quality impacts, aquatic biological impacts, thermal impacts, and impacts to historical structures.

If the applicant continues with its current proposal to use a once-through power plant cooling system that utilizes water from San Francisco Bay, staff would not support approval of the project. Use of once-through cooling would result in potentially significant impacts to aquatic biological resources, and it also faces significant regulatory uncertainty from both federal and state law requirements regarding such impacts that is likely to delay implementation of the project. To avoid these potentially significant impacts and likely regulatory delays, staff recommends that the license require the project to use an alternative cooling system that avoids use of the Bay for cooling water. Staff has identified hybrid (wet/dry) cooling using reclaimed water from the City's wastewater treatment plant as a feasible upland alternative to once-through cooling.

The applicant may elect to pursue a different upland cooling alternative. Whether hybrid cooling, dry cooling, or some other form of cooling is chosen, some additional analyses will be necessary to analyze impacts associated with that alternative. However, in staff's view the switch to an alternative cooling method will avoid entirely both a potentially significant environmental impact, and the regulatory uncertainty and delays that will result from the applicant's proposal to use once through cooling.